

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Docket No.: HOPPE-10

| | |
|---|---|
| In re Application of: |) |
| THOMAS HOPPE |) |
| Cont. of Int. Appl. No.: PCT/EP02/09645 |) |
| Int. Filing Date: August 29, 2002 |) |
| For: ELECTRIC MOTOR WITH IMPROVED COOLING SYSTEM |) |

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Express Mail mailing label number: **EV 431637840 US**

Date of Deposit: **February 27, 2004**

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450".

ANTONELLA FUSILLO

(Name of person mailing paper or fee)



(Signature)

S I R:

In accordance with 37 C.F.R. 1.56, applicant wishes to call the attention of the Examiner to the following references A) to F) which were cited in the International Search Report issued by the European Patent Office with regard to the corresponding international patent application No. PCT/EP02/09645 and references G) to L). Applicant does not admit that any of the cited documents constitutes prior art against the pending application.

| | Country: | Patent or Appl. No: | Patentee or Applicant: | Issue or Filing Date: |
|----|----------|------------------------|---------------------------|--------------------------|
| A) | USA | US 5 751 077 A | Gonzales | 05-12-1998 |
| B) | Europe | EP 1 037 361 A | Hitachi | 09-20-2000 |
| C) | USA | US 5 767 600 A | Whiteley | 06-16-1998 |
| D) | USA | US 5 703 418 A | Assa | 12-30-1997 |
| E) | Japan | JP 04 183258 A | Daifuku | 06-30-1992 |
| F) | USA | US 2001/002507 | Miller et al. | 06-07-2001 |
| G) | USA | US 5 258 671 A | Vollenwyder et al. | 11-02-1993 |
| H) | USA | US 5 128 569 A | Gladish | 07-07-1992 |
| I) | Germany | DE 196 04 642 A1 | Krauss-Maffei | 08-14-1997 |
| J) | Germany | DE 197 15 530 A1 | Anorad Corp. | 10-30-1997 |
| K) | Germany | DE 199 12 136 C2 | Siemens Linear | 09-28-2000 |
| L) | Germany | DE 295 01 109 U1 | Baumüller Nürnberg | 06-01-1995 |

Copies of these references are submitted herewith along with form PTO-1449. The Examiner is requested to initial the attached form PTO-1449 and to return a copy of the initialed document to the undersigned as an indication that the attached references have been considered and made of record.

☒ [X] This Information Disclosure Statement is filed within three months of the filing date of a national application other than a continued prosecution application under 1.53(d), so that no fee under 37 C.F.R. §1.97 is due.

☐ [] This Information Disclosure Statement is filed within three months of the date of entry of the national stage as set forth in 1.491 in an international application, so that no fee under 37 C.F.R. §1.97 is due.

☐ [] This Information Disclosure Statement is filed before the mailing of a first Office Action on the merits, so that no fee under 37 C.F.R. §1.97 is due.

- ☐ This Information Disclosure Statement is filed before the mailing of a first Office Action after the filing of a request for continued examination under §1.114, so that no fee under 37 C.F.R. §1.97 is due.
- ☐ This Information Disclosure Statement is filed after the issuance of a first office but before issuance of a final action under §1.113, or a notice of allowance under §1.311.
- ☐ This Information Disclosure Statement is submitted after the mailing of a final action or a notice of allowance, but before payment of the issue fee.
- ☐ The undersigned submits the following statement requesting consideration of this statement:

The undersigned hereby states:
 - ☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement;
 - ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in §1.56(c) more than three months prior to the filing of the information disclosure statement.
- ☐ The fee of \$180.00 set forth in 1.17(p).

☐ The Commissioner is hereby authorized to charge the fee as set forth in 1.17(p), and any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

☒ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 06-0502.

In order to satisfy the requirement under 37 C.F.R. §1.98(a)(3) for a concise explanation of the relevance of each item of information, applicant herewith submits a copy of the International Search Report together with a translation of the relevant pages thereof. In addition, applicant notes with respect to any information that is not in English language as follows:

Reference I) describes a linear motor in which the primary part (1) is cooled using a coolant circuit (7) to remove the quantities of heat loss arising in the current-carrying conductor windings so that the operational temperature required is not exceeded in the linear motor. The primary part (1) is surrounded completely by a cooling plate (10) through which coolant flows and by an enclosing housing (14). The cooling plate (10) is the element used to fasten the primary part (1) to that machine component (20) of the production machine which is to be moved.

Reference J) describes a linear motor having an epoxy core armature with dual cold plates attached to a top and a bottom of the epoxy core armature to effect cooling of the epoxy core armature. The use of dual cold plates with circulating cooling fluid reduces heat build up by providing paths of high thermal

conductivity from any point in the epoxy core armature to the cold plates. Also described are ceramic heat sink plates laminated to sides of the epoxy core armature to increase the thermal conductivity and the resultant power dissipation capacity of the epoxy core armature without introducing magnetic or electrically conducting materials. Other embodiments utilize cold plates formed from extrusions of aluminum or ceramic materials, or have forced air cooling wherein a U-frame of the linear motor has longitudinal flexible seals and air is forced through the U-frame in which the epoxy core armature travel. Yet another embodiment has a U-frame with ducts formed therein through which air is force. Orifices connect the ducts to an interior of the U-frame through which the epoxy core armature travels.

Reference K) describes a holding armature having an iron core (5) and capsule housing having side panels with two opposite right angles and ground area (13). Casting/sealing armatures are arranged in the form of wires (15) projecting into groove/slots. The wire forms a casting/sealing armature that can no longer be removed from the casting/sealing (20) that hardens by the capsule housing anchored on the motor core.

Reference L) describes a stator for an electric linear motor, including a iron core having a back portion provided with attachment and/or engagement elements for attachment of external carrier or fastener assemblies.

The above-identified application discloses and claims an invention patentable over this prior art.

Entry of the references above set forth into the file of the above application
is believed to be in order and is respectfully requested.

Respectfully submitted

By: 

Henry M. Feiereisen
Agent for Applicant
Reg. No. 31,084

Date: February 27, 2004
350 Fifth Avenue
Suite 4714
New York, N.Y. 10118
(212) 244-5500
HMF:af

Form PTO-1449

U.S. Department of Commerce
Patent and Trademark Office**INFORMATION DISCLOSURE CITATION**

| | | |
|---|---|---|
| Attorney's Docket No. HOPPE-10 | Applicant THOMAS HOPPE | Cont. of Int. Appl. No. PCT/EP02/09645 |
| Int. Filing Date August 29, 2002 | Group | Examiner |

U.S. PATENT DOCUMENTS

| Examiner Initial | Document Number | Date | Name | Class | Subclass | Filing Date, if appropriate |
|------------------|-----------------|------------|--------------------|-------|----------|-----------------------------|
| | 5,751,077 | 05-12-1998 | Gonzales | | | |
| | 5,767,600 | 06-16-1998 | Whiteley | | | |
| | 5,703,418 | 12-30-1997 | Assa | | | |
| | 2001/002507 | 06-07-2001 | Miller et al. | | | |
| | 5,258,671 | 11-02-1993 | Vollenwyder et al. | | | |
| | 5,128,569 | 07-07-1992 | Gladish | | | |

FOREIGN PATENT DOCUMENTS

| | Document Number | Date | Country | Class | Subclass | Translation |
|--|------------------|------------|---------|-------|----------|-------------|
| | EP 1 037 361 A | 09-20-2000 | Europe | | | yes |
| | JP 04 183258 A | 06-30-1992 | Japan | | | no |
| | DE 196 04 642 A1 | 08-14-1997 | Germany | | | no |
| | DE 197 15 530 A1 | 10-30-1997 | Germany | | | no |
| | DE 199 12 136 C2 | 09-28-2000 | Germany | | | no |
| | DE 295 01 109 U1 | 06-01-1995 | Germany | | | no |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |
| | | |

Examiner:**Date considered:**

*Examiner: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.